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Stabroek Market, Georgetown, British Guiana: a Complete Shopping Center under One Roof

(SEE BULLETIN NO. 1)

W. ROBERT MOORE

Riches Yet Untapped—The colony covers an area of 83,000 square miles, almost matching Minnesota in size. Seven-eighths of the territory, a tropical treasure house, has scarcely been scratched for development. Inland, guarded by thick jungles, lie deposits of gold, diamonds, bauxite (aluminum ore), and possibly oil. Livestock thrives in the savannah belt, and farther in the interior jumbled mountains rise.

The Empire's only possession on South America's mainland, British Guiana is located far up on the Atlantic coast between Venezuela and Dutch Surinam. The territory has often changed hands since the Dutch began trading there around the end of the 16th century. It finally came under the Union Jack in 1814, near the end of the Napoleonic wars.

So impenetrable was the hinterland that no one attempted to survey it. As a result, Venezuela and Britain argued over the boundary. The United States finally brought about a settlement at the turn of the century by threatening to invoke the Monroe Doctrine.

Content with the coastal belt and its sugar, British settlers long left interior Guiana to the aboriginal Carib and Arawak Indians and to a few hardy Europeans who paddled up steaming rivers for balata, a wild gum suitable for golf balls and wire insulation.

Familiar to GI's—Georgetown, the colony's capital (illustration, cover), is known to Americans who served at the Air Force's near-by Atkinson Field. Right to build the air base was obtained in the "destroyers-for-bases" deal of early World War II. The jungle-edged field, if not the city, became familiar to many GI's returning from overseas via the Casablanca-Dakar-Georgetown-Puerto Rico air route.

The United States has ceased military use of Atkinson, now operated as a civil airport by the colony, and also of a naval base at Makouria, about 40 miles up the Essequibo River, which also figured in the 1940 destroyers' swap. In an emergency, United States forces could take them over again because this pact gave Uncle Sam a 99-year lease.

A 1951 estimate gave British Guiana's population as 437,000. Nearly 200,000 are descendants of East Indians imported after the abolition of slavery to till the sugar fields. A bare five per cent are Europeans.

Should forest resources be exploited, Guiana can produce a wealth of greenheart, mora, and wallaba—all building lumber—as well as precious cabinet woods. Lumbermen will have to accustom themselves to fauna that includes jaguars, vampire bats, and boa constrictors.

References—British Guiana is shown on the National Geographic Society's map of South America. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For additional information on the Guianas, see "Color Glows in the Guianas, French and Dutch," in *The National Geographic Magazine* for April, 1943; "A New World to Explore," November, 1932; and "Skypaths Through Latin America," January 1931. *(Issues of The Magazine not more than 12 months old are available to schools and libraries at a specially discounted price of 50¢ a copy. Earlier issues sell for 65¢ a copy through 1946; $1.00, 1930-1945; $2.00, 1912-1929. Write for prices of issues prior to 1912.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, May 3, 1948, "British Guiana Has Its Own 'India Problem'."

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UMI

EUGENE KLEIN

A Colony Within a Colony—Many of British Guiana's 200,000 East Indians retain their old-country customs. Most do not speak English. Many work on sugar plantations.

Bulletin No. 1, November 2, 1953

British Guiana Upset Affects Pay Envelopes

WORRY about Christmas bonuses is camping on the doorstep of many workers in British Guiana. Some 30,000 employees of the sugar industry, hard hit by the political crisis which started to upset the colony's economic life as far back as August, can't tell at present whether they can count on a bonus or not. The Yuletide extra usually adds an important slice to the family's annual income.

Sugar and its by-products are the colony's big money-makers. Sugar cane and rice grow in an intensively cultivated coastal zone.

Planters fear that political discord may cut the total sugar crop this year by 35,000 tons, or 15 per cent. To complicate matters, harvest is not completed and the time is near when workers shift from the cane fields to gather in the rice on their own farms.

the area has been a semi-independent state since 1947, linked economically and politically with France. However, if the nations of Western Europe unite, the Saar might acquire a status similar to that of the District of Columbia, in the United States.

Leveled by wartime bombing and shelling, Saar industry is again operating at capacity. More than sixteen million tons of coal were mined last year. Reserves are estimated at more than five billion tons, enough for three centuries. Its six huge steel mills produce three million tons of steel annually. Total production in 1952 was valued at 538 million dollars, one-third higher than in 1938, the previous peak.

Part of "Little Europe" Pool—Some 70,000 workers, a fourth of the total Saar labor force, produce seven per cent of the steel of "Little Europe," the six-nation group that pools its coal-steel output under the Schuman Plan. Minimum wage is $60 a month, not much below the average wage in neighboring Germany.

All the Saar's iron ore for steel comes from the near-by French province of Lorraine. Most of its food also comes from France. The Saar could live but 50 to 60 days on the food it raises annually. Much of its area is too mountainous for farming (illustration, back cover).

Other leading Saarland industries include chemicals, ceramics, foodstuffs, glassware, and building materials. Its goods are marketed in 88 countries, with France accounting for most of its wholesale trade.

Solidly German—The Saar, an area only half the size of Long Island, is almost solidly German. There is not even a French minority of permanent residents. Language, culture, traditions, and educational system are all German. Native Saarlanders, however, are often smaller and darker in coloring than Germans, suggesting traces of early pre-German peoples.

France occupied the territory following both world wars. In 1935 a plebiscite returned it to Germany by a nine-to-one vote. During World War II, 65,000 Saar dwellings were demolished, leaving more than a fourth of the inhabitants homeless. One house in fifteen was destroyed, compared to one out of 22 in France and one out of 65 in Great Britain.

In postwar years the Saar has been a member of the French customs union and shares in revenues. It uses the franc as currency. France operates the region's 18 coal mines under a 50-year lease and is responsible for its military protection and foreign relations.

Saarlanders have intense civic pride. They keep their houses and streets clean. They work hard, but when the five o'clock whistle blows, they thoroughly enjoy themselves with their music and festivals.

References—The Saar may be located on the Society's map of Western Europe. For information on the Saar in prewar days, see "What Is the Saar?" in *The National Geographic Magazine* for February, 1935.

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UMI

WOLFF FROM EUROPEAN

Saar Again Breathes Smoke and Fire—This prewar view of the Volklingen Iron Works is matched by present-day scenes of restored plants working at capacity.

Bulletin No. 2, November 2, 1953

Saar May Become Europe's Federal District

EUROPE'S most densely populated area, the coal-rich Saar on the Franco-German border, is a small but important cog in the machinery of the proposed European Federation. Just where and how to fit in its 991 square miles is a problem facing French, German, and other political planners.

With a 954,000 population, the Saar has 963 people per square mile—so many more than the 50-per-square-mile average of the United States that there is hardly any comparison. It lies in southwest Germany's Moselle River basin. Saarbrucken is the capital. Once part of Germany,

Grand Lake covers only a tiny bit of an area over which ocean waters spread before mountains pushed up to form part of the Continental Divide. The Trail Ridge Road, a modern highway, now runs through these mountains. Fifteen miles of it is above 11,000 feet and for one stretch of four miles it never dips below 12,000 feet.

The tourist industry joins with the State's other activities in planning a prosperous tomorrow. An unfailing attraction for visitors is the grave of Buffalo Bill high on Lookout Mountain near Denver.

At Mesa Verde National Park, ruins of the "apartment houses" of Cliff Dwellers are still seen where they were built high above ground 700 or 800 years ago.

Shale oil, from which so much is now expected, got off to a bad start. An early settler near Rifle, in building a new house, constructed a big fireplace and chimney from dark-gray shale lying about. Friends coming for a "house warming" got more than they bargained for. The hearth fire ignited the oily fireplace stones and burned the home down.

References—Colorado is shown on the Society's map of the Southwestern United States.

For additional information, see "Roaming Through the West's Fantastic Four Corners," in *The National Geographic Magazine* for June, 1952; "High Country of Colorado," July, 1946; and "Down the Rio Grande," October, 1939.

A Million Tomatoes Stand by for the Canner—Ripe red tomatoes from Colorado's fertile fields await their turn outside the cannery at Grand Junction. Recent discovery of uranium has added underground wealth to the surface riches of fruits and vegetables for which scientific farming has made the area famous.

DEAN

Bulletin No. 3, November 2, 1953

Shale Oil Brightens Colorado's Future

COLORADO struck oil earlier than any state except Pennsylvania. But still untapped is a store of rock-bound petroleum estimated at 11 times greater than the total United States consumption since 1895.

This tremendous reserve lies near Rifle in the western part of the State. Like the "locked-in goodness" of breakfast cereals, the petroleum is imprisoned in its surroundings. It is in hard form, encased in a slate-gray shale called marlestone.

Colorado Means Red—Experts have wrestled for years with the problem of extracting shale oil at a cost comparable to that of natural petroleum. They disagree as to how long it will be before Americans may heat their houses and drive their cars with the new fuel. The prospect, however, makes Colorado's bright future even brighter.

The Rocky Mountain State has come a long way since early Spanish explorers, seeing reddish rock formations, called the country *colorado*, meaning "red." Neither the Dons nor later American pioneers and gold seekers considered the area anything but an uninteresting combination of dreary prairie and rugged mountains that slowed westward travel. They did not realize that the ground they trod was rich in gold, silver, oil, or that it hid the biggest uranium supply yet found in the nation.

Could they have foreseen the State as it is today, with its 1,300,000 people, they would not have been so anxious to push on to the Pacific. Denver, the capital, and such cities as Colorado Springs, Boulder, Grand Junction, Trinidad, Greeley, and many others have sprung up around mineral discoveries or risen in the midst of irrigated farmlands that were "desert" to the pioneer. Scenic grandeur and healthful climate have been factors in the growth in many areas.

The lowest point in the State is farther above sea level than Pennsylvania's highest mountain. Elevations range from 3,385 feet in the plains to 14,431 feet at Mt. Elbert, the highest peak.

Gold Discovered in 1858—The first gold in Colorado was discovered in the plains near Denver in 1858, and later in the mountains. Gold seekers swarmed into the State. Many painted "Pikes Peak or Bust" on the sides of their wagons and set out hopefully. Some were lucky. Others lost everything but their sense of humor. Drawing a line through the first slogan, they wrote under it "Busted, by Gosh!" and started home.

Later prospectors found silver, coal, and oil. Cattle and agriculture eventually became big business. Thanks to scientific irrigation, fruit and vegetable growing also blossomed into nation-wide importance. Tomatoes (illustration, below), potatoes, sugar beets, and other vegetables grow in large quantities. Processing plants make beet sugar. Fine peaches and other fruits are grown. Rocky Ford is synonymous with cantaloupes.

During free hours and days Coloradans join friends from other states in such sports as mountain climbing, skiing, hiking, horseback riding, and, surprisingly enough, yacht racing. Grand Lake, more than a mile and a half above sea level and not far from Denver, is one of the world's highest yachting centers.

gevity prospects. The majestic beast of Asia and Africa trumpets through the jungles 45 to 70 years. The rhinoceros averages 36 to 50.

Gorillas and other large apes may see 35, longer than many human beings in a wild state of existence. Whales, largest of the mammals, have been known to live for more than 30 years, but information is lacking on what their maximum age may be. The lion, long hailed as the king of beasts, has a comparatively short reign of 20 to 30 years.

For tortoises, 152 years is the oldest age that has been fully authenticated. One captured in 1766 on the Indian Ocean island of Mauritius had that many birthdays before meeting death in a 1918 accident.

The island of St. Helena is the home of a land tortoise which natives claim is 178 years old. It is reputed to be the only living link with Napoleon, exiled after Waterloo to this remote dot in the South Atlantic where he died six years later in 1821. No authentic proof exists, however, to support the age ascribed to this historic islander.

A Tortoise on Land, a Turtle at Sea—Giant tortoises of the Galápagos Islands are known to survive for more than a century. The islands were named from a Spanish word meaning turtle. Tortoises are of the Chelonian order of reptiles and those living in water are usually called turtles.

Among domestic animals, the horse is longest lived, averaging 20 to 35 years. Cows rarely get beyond 25. Dogs have from 5 to 15 years to lavish friendship on masters. Cats—ones that live well—have a life span of only 7 to 15 years in spite of their mythical nine lives.

Patriarch of fishes is the carp. Some of these fresh-water fish have been known to frequent quiet ponds for 60 to 75 years. Trout, bass, and perch rarely enjoy 15, and a five-year old minnow is a rarity.

Parrots share with ostriches, eagles, and vultures the best longevity outlook among birds—up to 60 years. Canaries rarely exceed 25, robins 12, and starlings 8.

Good Food Helps Queen Bee to Ripe Old Age—The life of many insects is reckoned in weeks. The butterfly flits about for only 8. Most durable are queen ants which sometimes become "sweet 16" (years), and queen bees which occasionally live 5 years or more. Part of the secret of the queen bee's long life seems to lie in a nourishing jelly secreted from the glands of worker bees and fed to her.

A mouse can play for as long as 5 years if it avoids traps and cats. The maximum age for a fox is about 12; some deer and beaver live 15 years. With luck, squirrels and rabbits may live 8 to 12 years. Pigs and sheep can reach 20.

Compared to the tortoise, other reptiles are mere babes. Record for the alligator—escaping handbag and shoe manufacturer—is 43 years.

References—For additional information on natural history, see "Crickets, Nature's Expert Fiddlers," in *The National Geographic Magazine*, September, 1953; "Wildlife of Mount McKinley National Park," August 1953; "The Ape with Friends in Washington" and "Rip Van Winkle of the Underground" (cicada), July, 1953; "London's Zoo of Zoos," June, 1953; "Nature's Tank, the Turtle," May, 1952; "Dog Mart Day in Fredericksburg," June, 1951; "Capturing Giant Turtles in the Caribbean," August, 1943; "King of Cats and His Court," February, 1943; "Panther of the Hearth," November, 1938; and other articles listed under divisions of "Natural History" in the *Cumulative Index to the National Geographic Magazine* in your school or public library.

UMI

DR. RAYMOND A. DILLON

Sea Voyagers Grapple a Land Cruiser—American boys circling the globe encounter an "armored cruiser of the reptile world" on the Galápagos Islands. These huge tortoises, which outlive man and other animals, exist on the scanty vegetation of the semidesert islands. They go for long periods without food or drink.

Bulletin No. 4, November 2, 1953

Man and Tortoise Live Longest

WHO LIVES the longer, man or some other of the world's creatures? The old question has been brought to the fore again by a tortoise found in Rhode Island. Experts agree it is at least 129 years old.

A small boy came upon the elderly reptile. It bore the date 1844 on its shell. The lad's father thought it would be a good idea to have naturalists take a look at "Snappy," so it was packed off to the Bronx zoo in New York. Scientific detective work established beyond reasonable doubt that the date had been carved in 1844. The clear outlines of the figures convinced the experts the tortoise must have been 20 years old and full grown when the numbers were cut in the shell. The 109 years that have since elapsed would make the age 129.

Man's life expectancy today is greater than that of any earthly creature except the tortoise. Vital statistics show the average span for the world's human population is now about 62 years, still short of the traditional three score and ten. Some enjoy life far beyond the 70-year mark, a few into the 100's. No one, however, has yet approached the span of the venerable biblical patriarch of whom Genesis says, "All the days of Methuselah were 969 years; and he died."

The elephant ranks next to man among mammals with the best lon-

monkeys and the screech of blue jays in Chandigarh valley. A creation of combined Indian and foreign architectural and engineering talent, this city, spreading over 10,000 acres, requires the work of 10,000 men and will cost more than $30,000,000.

Lahore Was Old Capital—The Punjab was split when India was partitioned in 1947. The ancient Punjab capital, Lahore, was in the section that went to Pakistan. Statesmen of the Punjab decided to follow the example of the United States, Australia, and of India herself, and erect an entirely new city for its capital.

Chandigarh is a combination of the traditions of the East and new Western ideas. It is a city of enormous blocks, three-quarters of a mile long and half a mile wide. Each houses 10,000 to 20,000 people. Each neighborhood unit has its own schools, playground, park, club, motion picture theater, and bazaar.

Only footpaths, and bicycle and bullock-cart paths cross the huge blocks; all bus, truck, and automobile traffic is routed around them. In these self-sustaining communities the leisurely atmosphere traditional to Punjab village life will prevail.

On a city-wide scale, there will be a central market place. There modern department stores, based on the Western plan, will compete with the open-air stalls of private merchants—holdovers from the bazaars of the Orient.

A hospital, museum, library, university, four colleges, open-air theater, stadium, and half a dozen swimming pools are among other civic institutions planned for the young capital.

Reflection Pool for State Buildings—Grouped on a knoll at the northern boundary of the city, Chandigarh's buildings of state will reflect their red limestone hue in a scenic canal fashioned after the water gardens of the Taj Mahal. In this setting will stand the High Court, the Assembly Chamber, the Secretariat, and the Governor's residence.

Awaiting completion of the new capital, the Punjab government was temporarily quartered at Simla, a holiday resort in the foothills of the Himalayas which in prewar times was summer seat of the Indian government. Simla ceased to function as the Punjab's capital on September 21 and government offices started to move on that date. The new city was declared formally open on October 7.

Affairs of state will be the chief business of Chandigarh, but city officials are hopeful that industry will be spurred by cheap electricity from the huge new Bhakra Nangal Dam near by.

Large numbers of Hindus from Moslem Pakistan, skilled in various crafts and trades, are expected to settle in Chandigarh. The first section of the city will accommodate 150,000 persons.

References—The Punjab may be located on the Society's map of Southwest Asia.

For further information on India, see "India's Sculptured Temple Caves," in *The National Geographic Magazine* for May, 1953; "High Adventure in the Himalayas," August, 1952; "Delhi, Capital of a New Dominion," November, 1947; "India Mosaic," "India's Treasures Helped the Allies," and "South of Khyber Pass," April, 1946; "India—Yesterday, Today, and Tomorrow," October, 1943; and "New Delhi Goes Full Time," October, 1942.

UMI

R. RAFFIUS

In Jumna Shallows, Man and Water Buffalo Bathe—Rising high in the Himalayas, this river runs southwest through the Punjab plains where it supplies water for irrigation. Swerving southeast past New Delhi, India's present capital, and Agra, an ancient one, it flows into the sacred Ganges at Allahabad, 860 miles from its source.

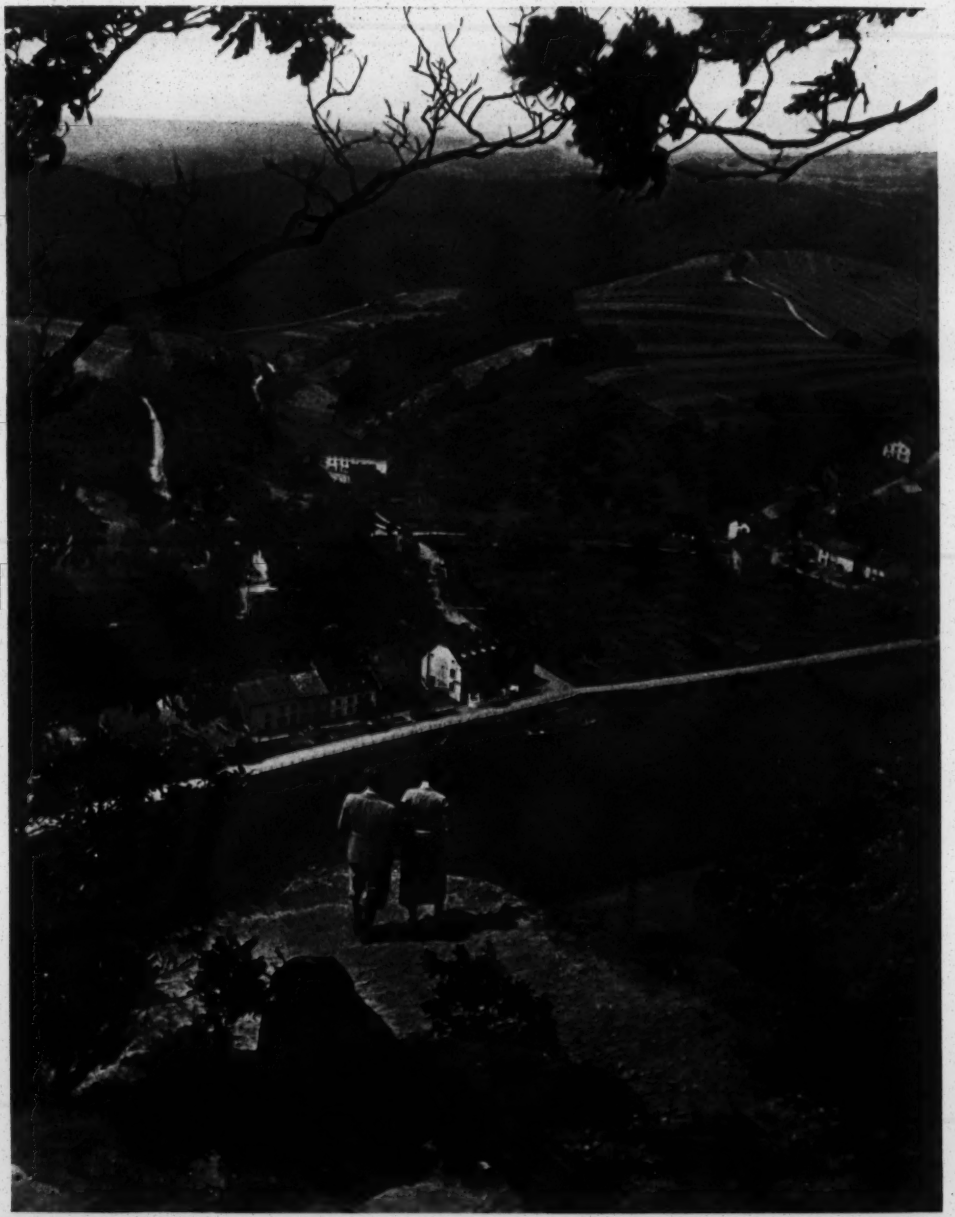
Bulletin No. 5, November 2, 1953

New Capital City Rises in India's Punjab

RISING on a fertile plain beneath the foothills of the snow-clad Himalayas is Chandigarh, the brand-new capital and pride of India's Punjab State. At the dedication last month of the first section to be completed, the city was described as the "turning of a dream into reality."

Named for Chandi, goddess of power, Chandigarh is to be a symbol of new India. Where only a tiny, mud-built village stirred drowsily three years ago, a modern metropolis of concrete, steel, and brick will ultimately house half a million Indians.

Today the roar of construction machinery drowns out the chatter of



WOLFF FROM EUROPEAN

Saarlanders' Love of Order Shows—As neat and orderly as a Pennsylvania countryside, this view along the Saar River near Mettlach—almost at the Luxembourg border—shows the civic pride and the care given homes, gardens, and fields. American Doughboys of World War I knew this river, as did their GI sons in World War II.